Notice of Allowability	Application No.	Applicant(s)	
	10/775,127	WATANABE, TOSHIMI	
	Examiner	Art Unit	
	Nelson D. Hernandez	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *2/11/2004*.

2. ☒ The allowed claim(s) is/are *1-4*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☒ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 2/11/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **Autofocus Camera Adjusting Focus Lens Position based on Illumination Characteristics**.

Allowable Subject Matter

2. Claims 1-4 are allowed.

3. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest, including all the elements of the present claim, that when the saturation determination device judges the image-capturing device to be in the saturated state, (a) the evaluation value calculation device calculates differences between the integrating values of the pre-removal image-capturing signals and the integrating values of the post-removal image-capturing signals each in correspondence to one of predefined positions of the focus lens and (b) the lens position calculation device calculates the focused lens position based upon the calculated differences.

Suda, US Patent 5,534,923 discloses a camera (Fig. 2) comprising: an image-capturing device (Fig. 2: 22) that captures a subject image through a photographic lens; a filter device (Band Pass Filter (BPF) as shown in fig. 2: 26) that removes a frequency component equal to or lower than a predetermined frequency from image-capturing signals output from the image-capturing device; a lens drive signal generation device (Fig. 2: 36) that generates a lens drive signal used to move a focus lens (Fig. 2: 20); an evaluation value calculation device (max value circuit as shown in fig. 2: 31) that calculates integrating values of pre-removal image-capturing signals still retaining the frequency component before the frequency component is removed by the filter device and integrating values of post-removal image-capturing signals (peak hold circuit as shown in fig. 2: 29) from which the frequency component has been removed, each in correspondence to one of predefined positions of the focus lens; a lens position calculation device (micro-processor 34 in conjunction with the arithmetic operating circuit 36 as shown in fig. 2) that calculates a focused lens position at which focus is achieved based upon the integrating values of the post-removal image-capturing signals calculated by the evaluation value calculation device (Col. 4, line 25 – col. 5, line 26; col. 6, lines 12-40).

Suda fails to teach or reasonably suggest a saturation determination device that judges the image-capturing device to be in a saturated state by using the pre-removal image-capturing signals, wherein: when the saturation determination device judges the image-capturing device to be in the saturated state, (a) the evaluation value calculation device calculates differences between the integrating values of the pre-removal image-

capturing signals and the integrating values of the post-removal image-capturing signals each in correspondence to one of predefined positions of the focus lens and (b) the lens position calculation device calculates the focused lens position based upon the calculated differences.

Chubachi, US Patent 6,700,618 B1 teaches an automatic focus-detecting apparatus wherein a highly bright object is detected using a highly bright object detector (Fig. 5: 206) in order to determine the focus position by adjusting the outputs of the integrators (Fig. 5: 204a and 204b) to control the focus evaluation signal in order to correct the focus point of a camera when high luminance objects are present (Col. 7, line 66 – col. 9, line 38).

Chubachi fails to teach or reasonably suggest that when the saturation determination device judges the image-capturing device to be in the saturated state, (a) the evaluation value calculation device calculates differences between the integrating values of the pre-removal image-capturing signals and the integrating values of the post-removal image-capturing signals each in correspondence to one of predefined positions of the focus lens and (b) the lens position calculation device calculates the focused lens position based upon the calculated differences.

Lee at al., US Patent 5,539,462 teaches a camera auto-focus system (Figs. 1-3), wherein highly bright objects are taken in consideration to perform the focusing method, wherein depending on a count of how many pixels are identified as being highly bright (this is done by using comparing the pixel value with a predetermined threshold), the system would decide whether to use the output of a signals output from

a band-pass filter 50 or a band-pass filter 52 which are outputs to detectors 58 and 60 respectively to obtain focus evaluation values 64 and 66 (See fig. 16) (Col. 4, line 3 – col. 8, line 27; col. 9, line 41 – col. 10, line 15).

Lee et al. fails to teach or reasonably suggest that when the saturation determination device judges the image-capturing device to be in the saturated state, (a) the evaluation value calculation device calculates differences between the integrating values of the pre-removal image-capturing signals and the integrating values of the post-removal image-capturing signals each in correspondence to one of predefined positions of the focus lens and (b) the lens position calculation device calculates the focused lens position based upon the calculated differences.

The teaching of Suda, Chubachi and Lee et al. either alone or in combination fails to teach or reasonably suggest that when the saturation determination device judges the image-capturing device to be in the saturated state, (a) the evaluation value calculation device calculates differences between the integrating values of the pre-removal image-capturing signals and the integrating values of the post-removal image-capturing signals each in correspondence to one of predefined positions of the focus lens and (b) the lens position calculation device calculates the focused lens position based upon the calculated differences.

Contact

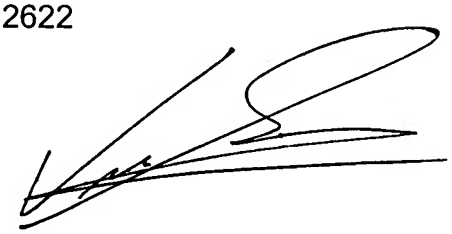
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernandez whose telephone number is (571) 272-7311. The examiner can normally be reached on 8:30 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nelson D. Hernandez
Examiner
Art Unit 2622

NDHH
April 10, 2007



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